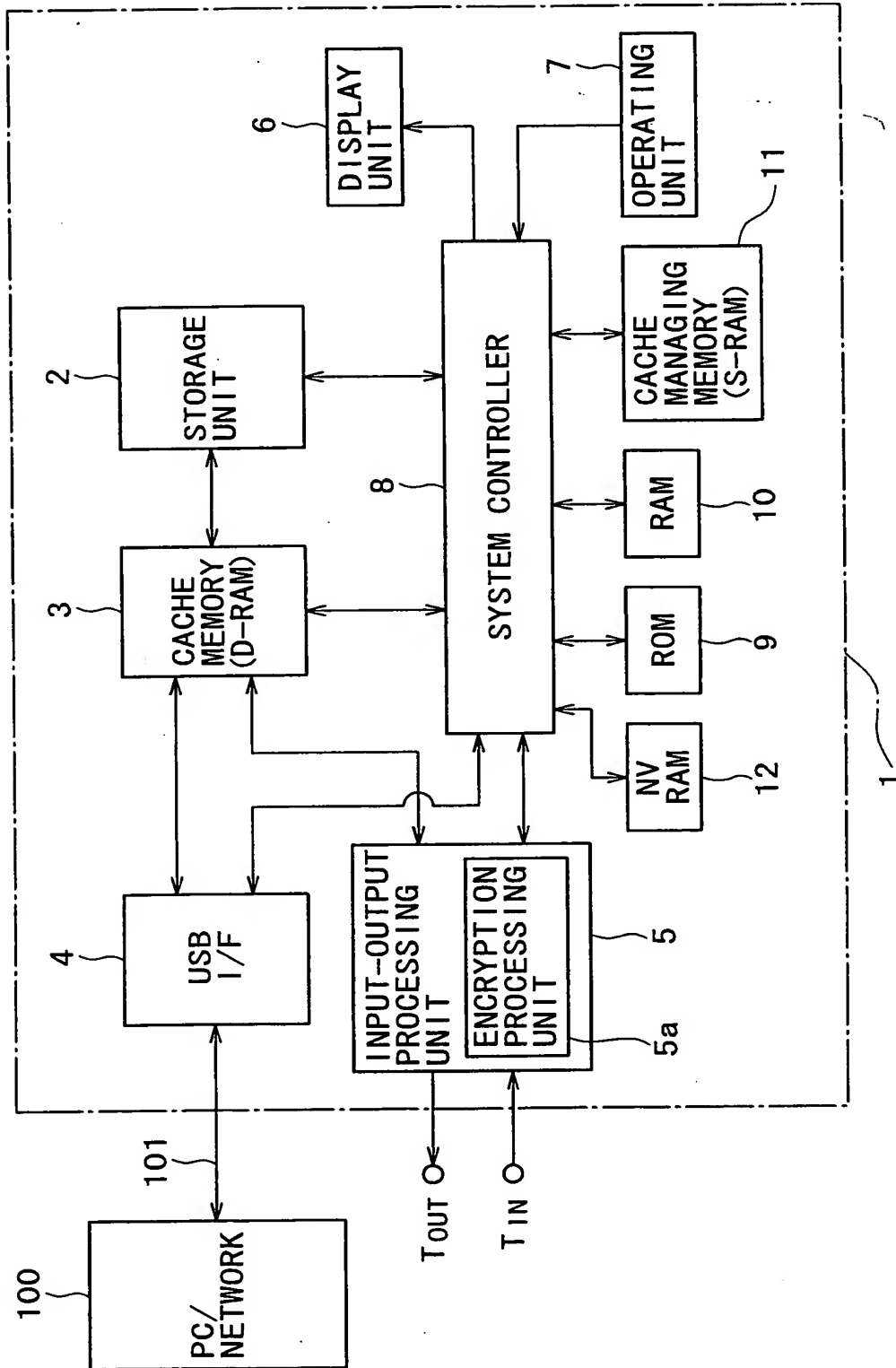


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FIG. 1



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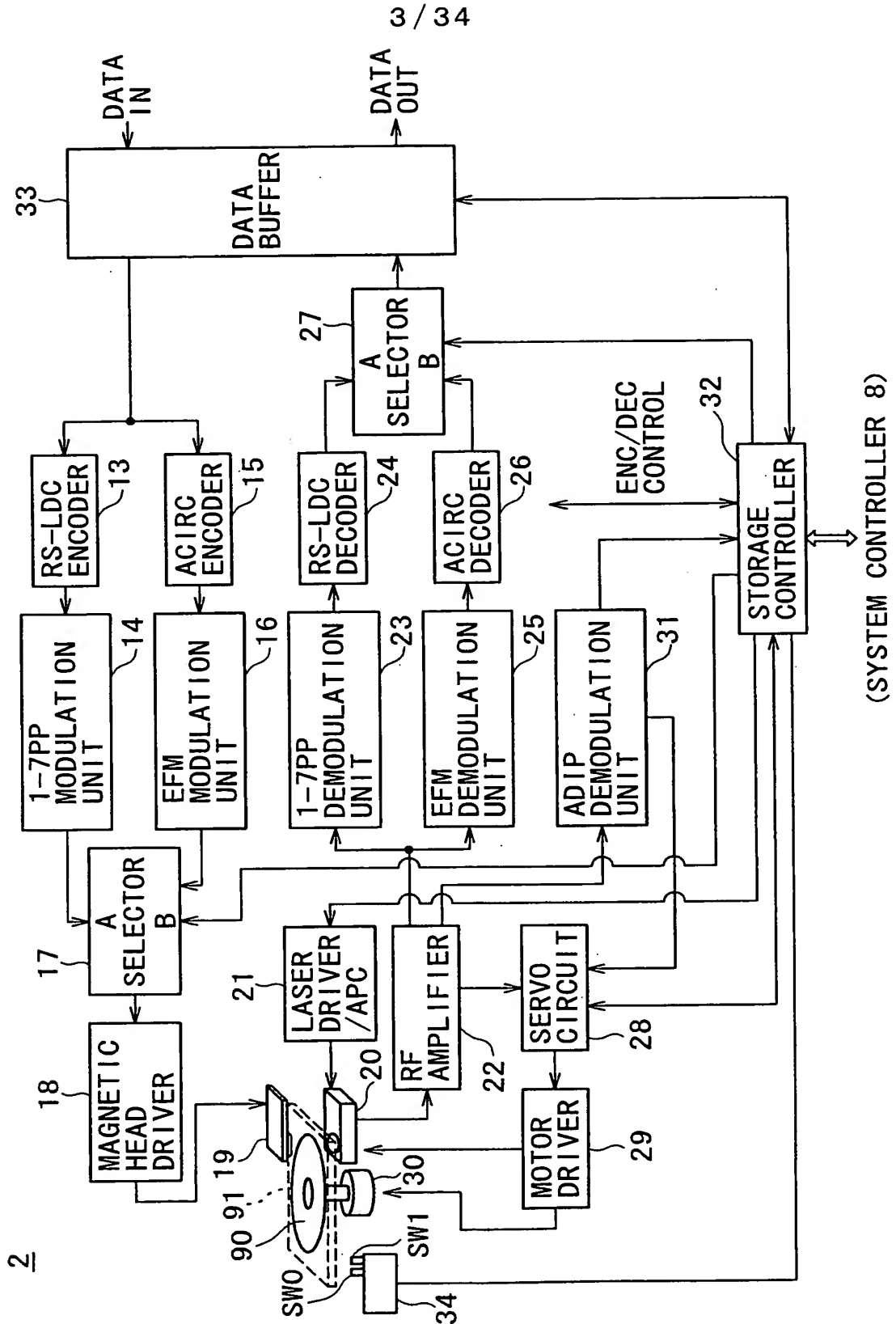
## FIG. 2A

	REPRODUCTION-ONLY MD /RECORDING AND REPRODUCING MD
TRACK PITCH	1.6 $\mu$ m
BIT LENGTH	0.59 $\mu$ m/bit
$\lambda$ · NA	780nm · 0.45
RECORDING SYSTEM	GROOVE RECORDING
ADDRESSING SYSTEM	SINGLE SPIRAL BOTH-SIDE WOBBLE
MODULATION SYSTEM	EFM
ERROR CORRECTION SYSTEM	ACIRC
INTERLEAVE	CONVOLUTION
REDUNDANCY	46.3%
DETECTION SYSTEM	BIT BY BIT
LINEAR VELOCITY	1.2m/s
DATA RATE	133KB/s
TOTAL CAPACITY	164MB (140MB)
MINIMUM REWRITING UNIT	32 SECTORS + 4 LINK SECTORS

## FIG. 2B

	HIGH-DENSITY MD TYPE A, B	HIGH-DENSITY MD TYPE C
TRACK PITCH	1.5~1.6 $\mu$ m	1.25 $\mu$ m
LINEAR DENSITY	0.437 $\mu$ m/bit	0.16 $\mu$ m/bit
CAPACITY	300MB	1GB
TRANSFER RATE	4.37Mbps	9.83Mbps
LINEAR VELOCITY	2.4m/sec	1.98m/sec

FIG. 3



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FIG. 4

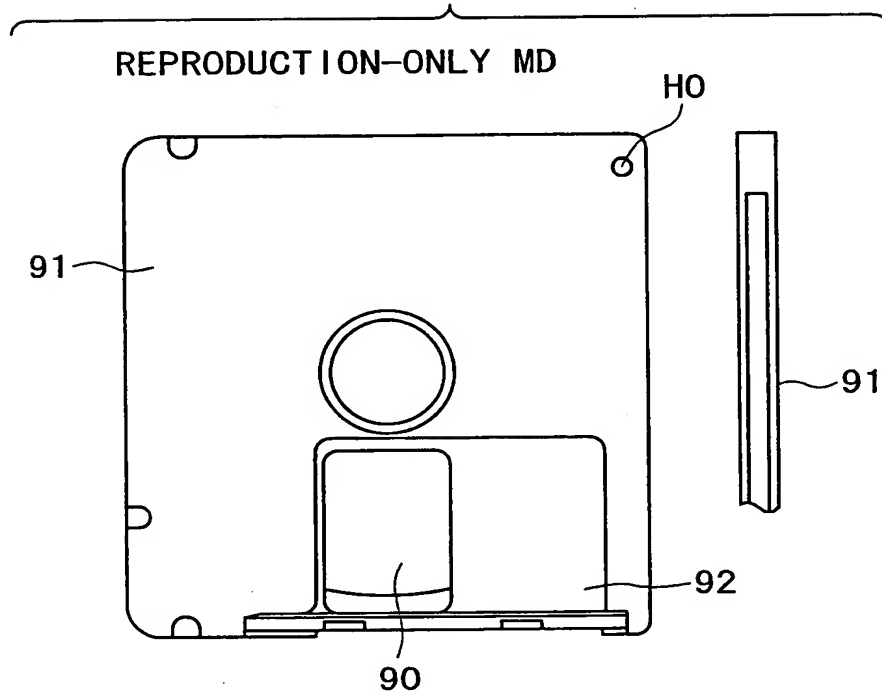
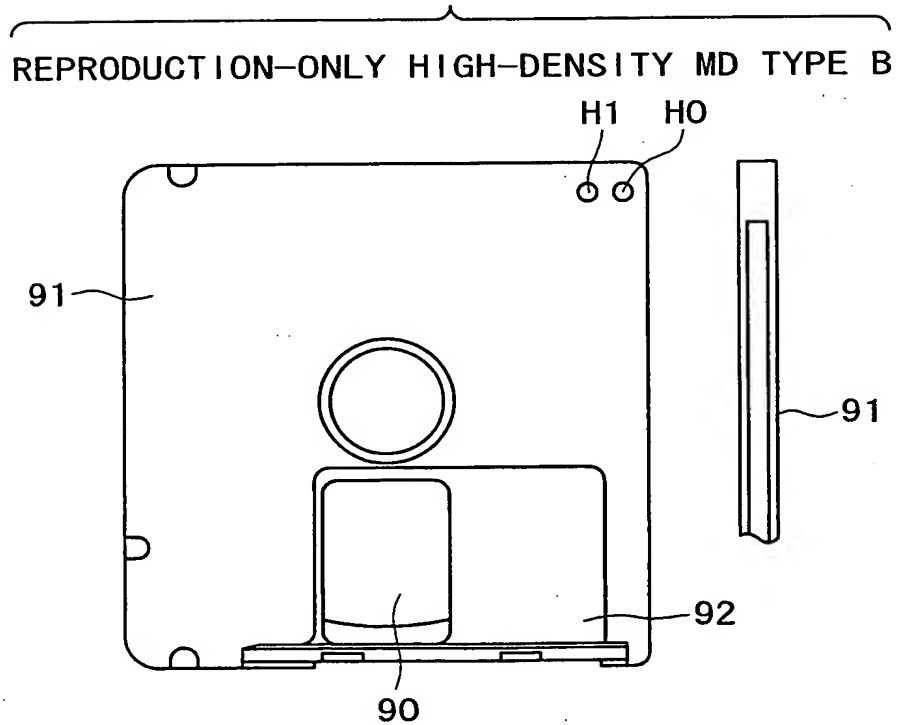


FIG. 5



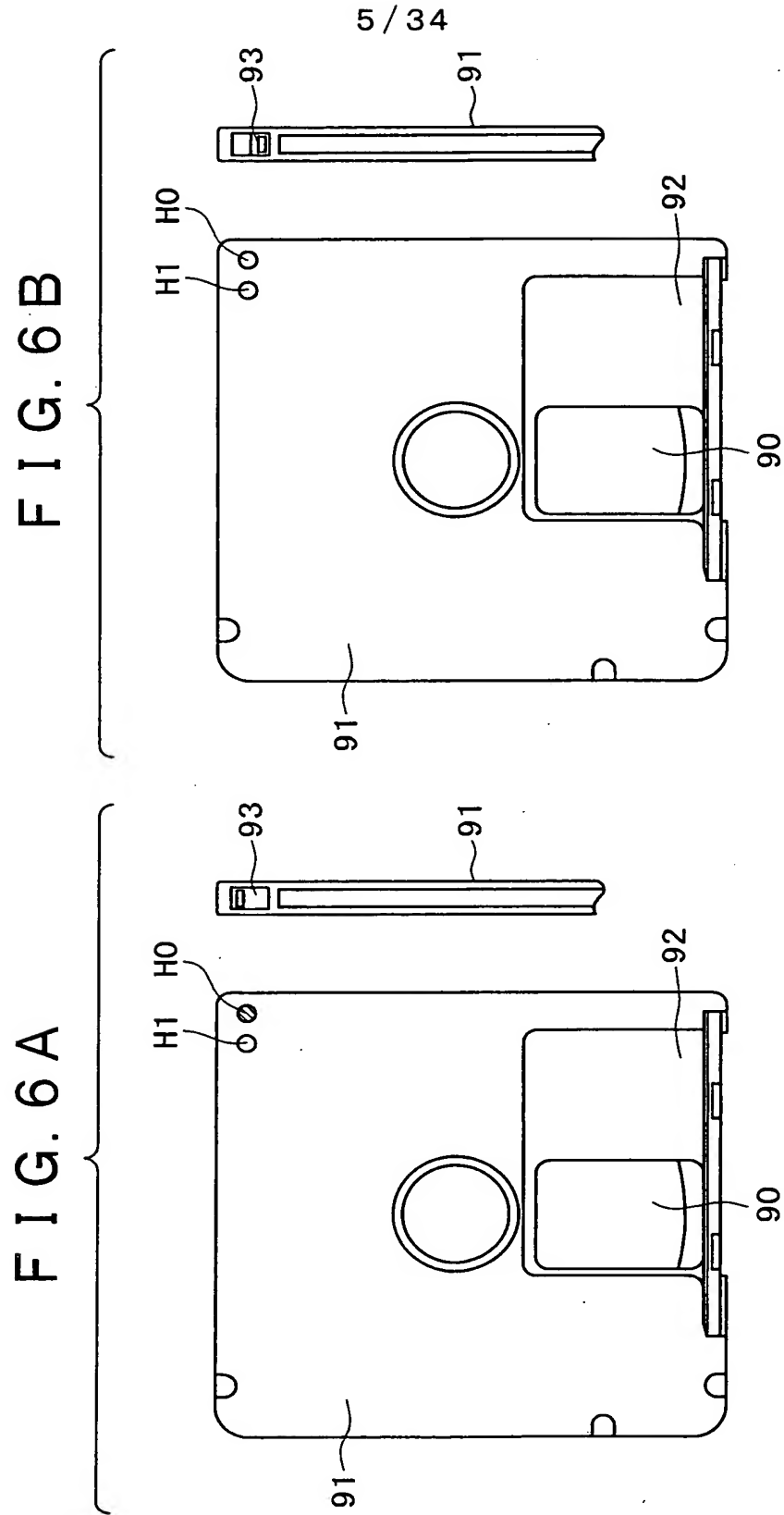


FIG. 7A

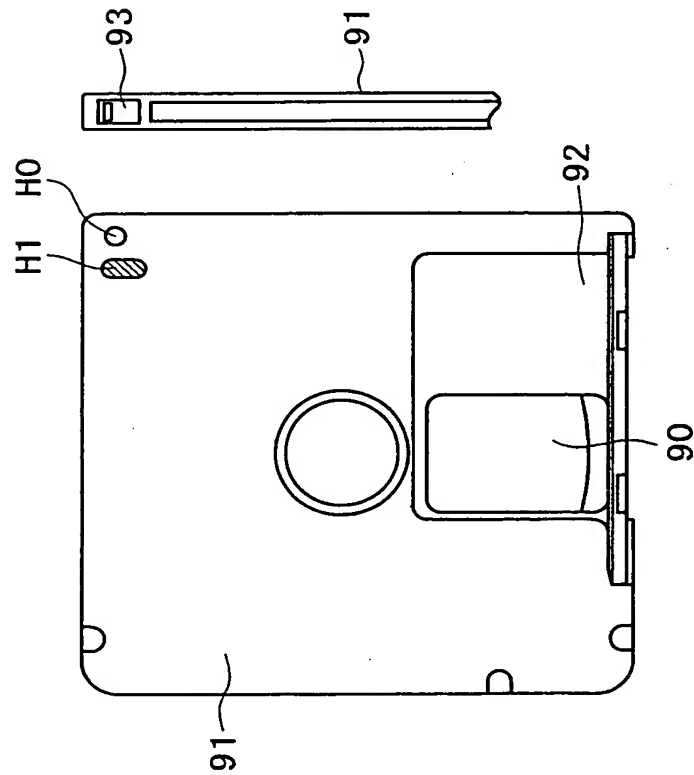
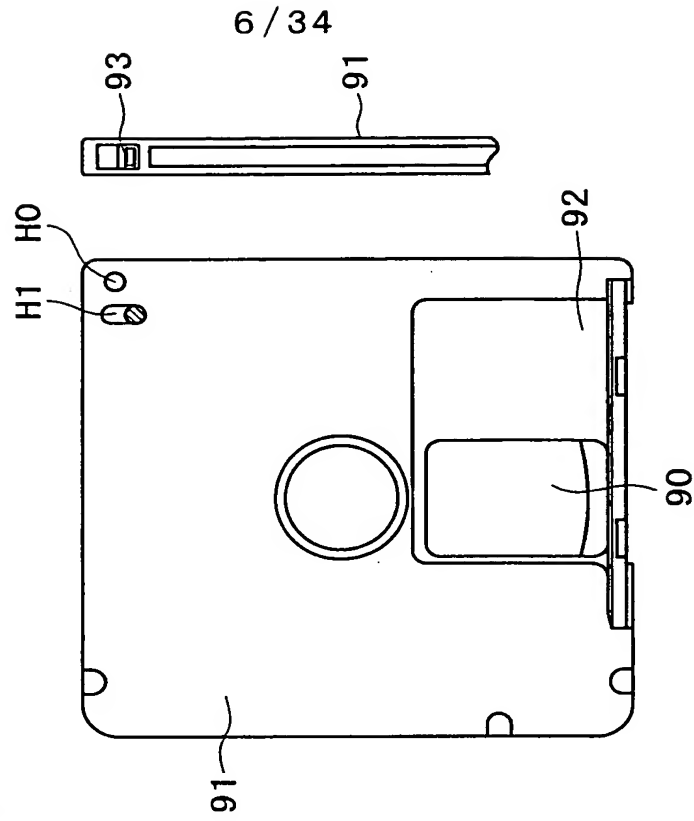


FIG. 7B



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FIG. 8C

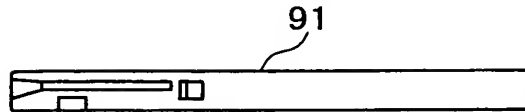


FIG. 8D      FIG. 8A      FIG. 8E

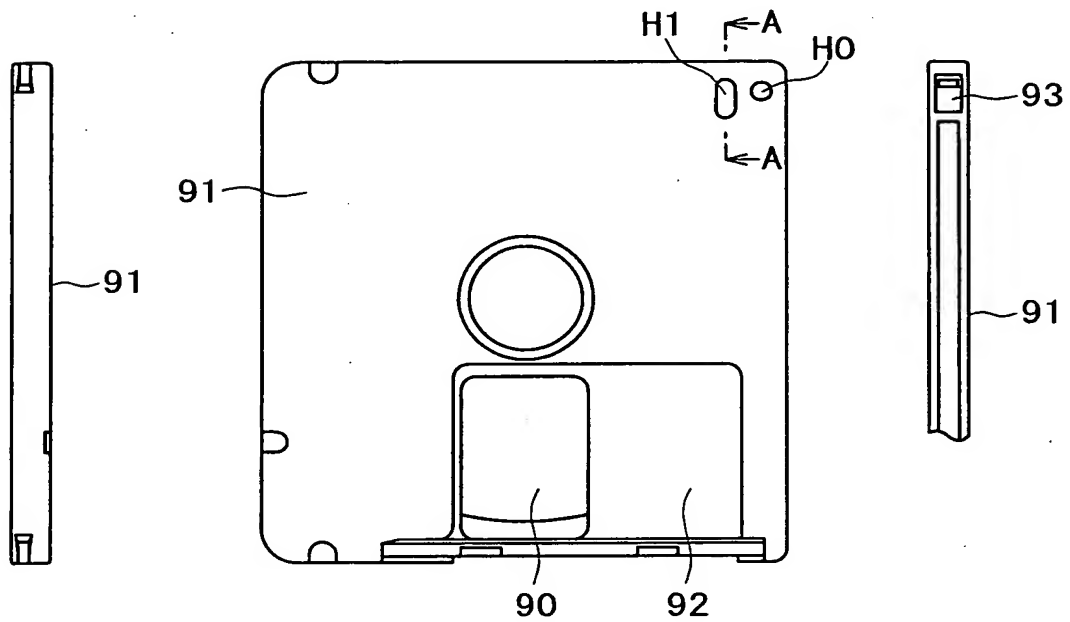
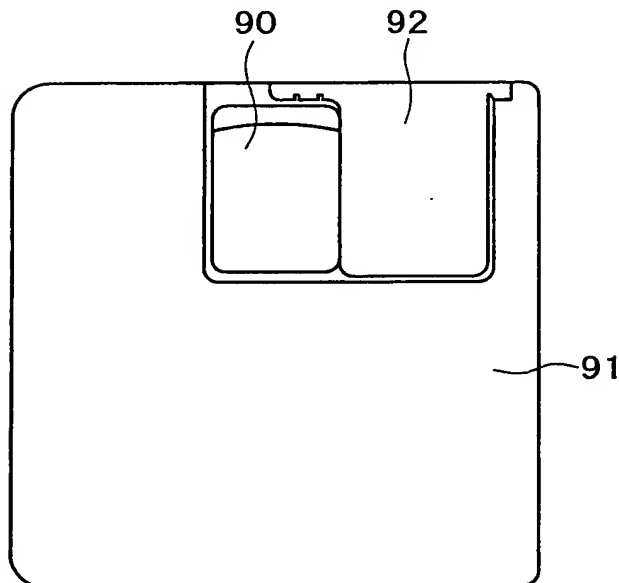


FIG. 8B



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FIG. 9A

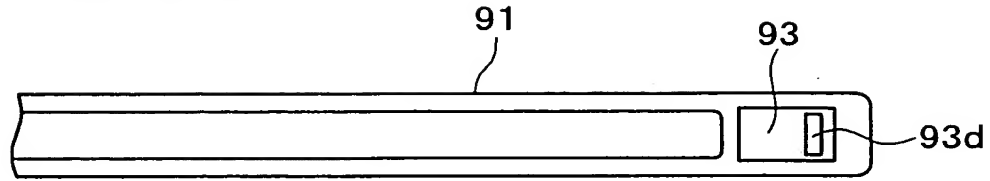


FIG. 9B

SECTION A-A

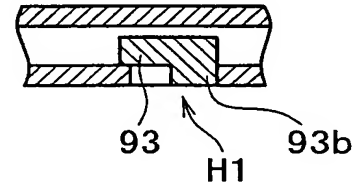


FIG. 9C

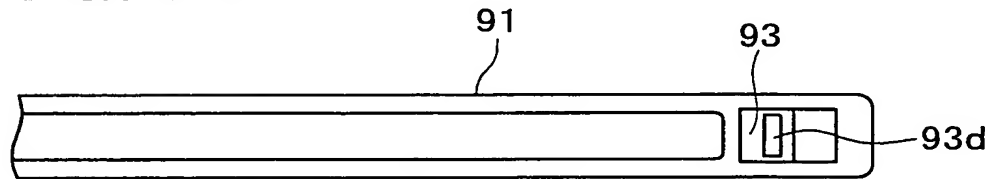
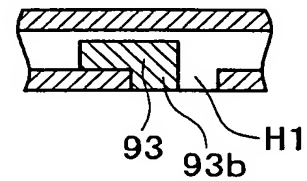


FIG. 9D

SECTION A-A





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FIG. 10A

<RECORDABLE>

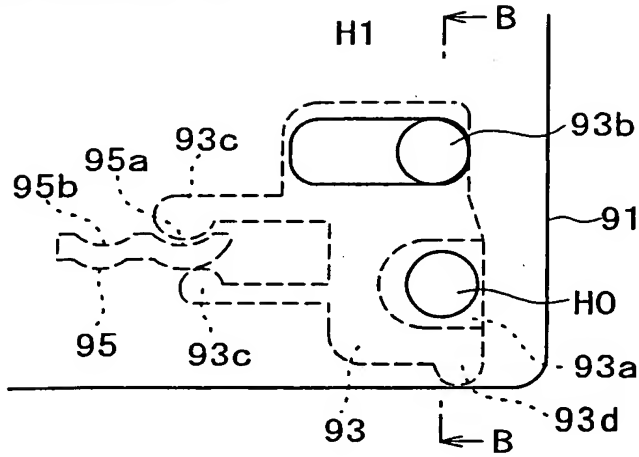


FIG. 10B

SECTION B-B

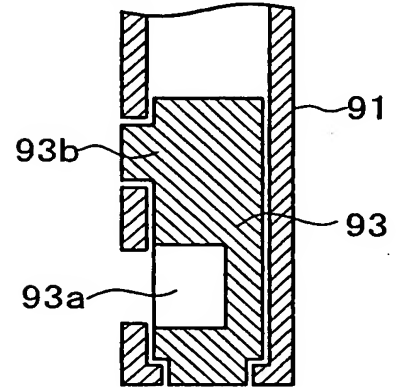


FIG. 10C

<NOT RECORDABLE>

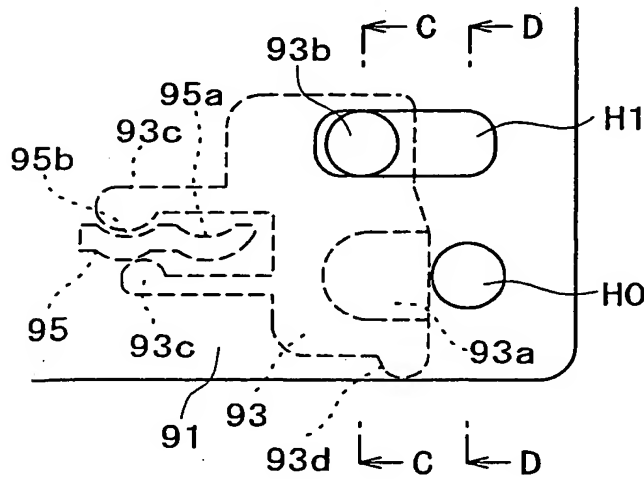


FIG. 10D

SECTION D-D

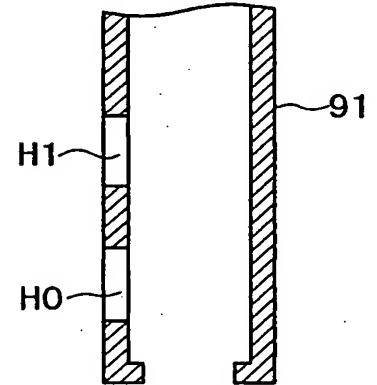
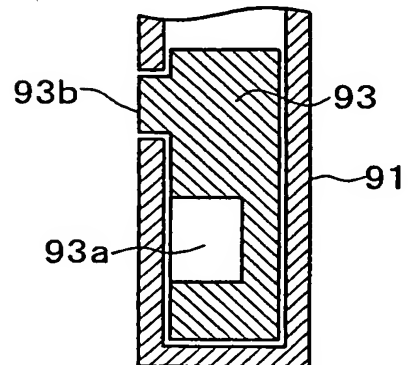


FIG. 10E

SECTION C-C



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HIGH-DENSITY MD TYPE B/TYPE C

FIG. 11A

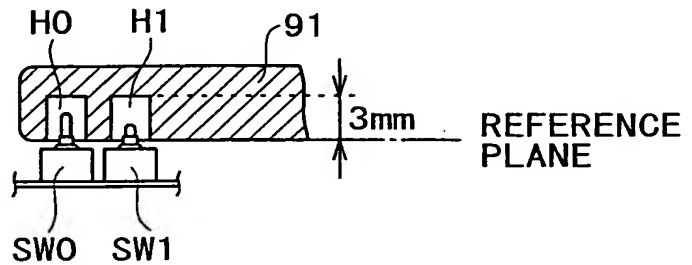
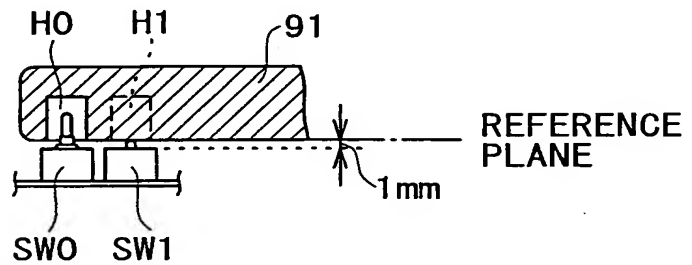
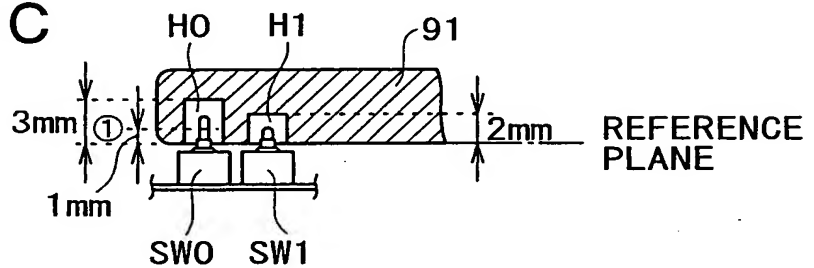


FIG. 11B



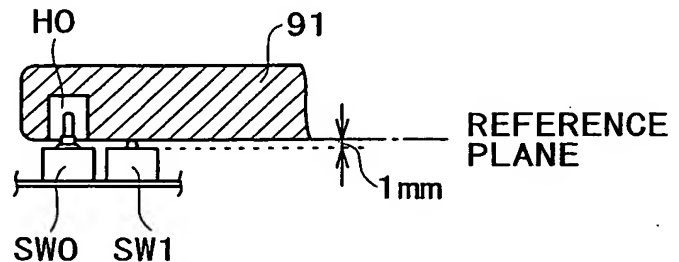
RECORDING AND REPRODUCING MD/  
HIGH-DENSITY MD TYPE A

FIG. 11C



REPRODUCTION-ONLY MD

FIG. 11D



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FIG. 12A

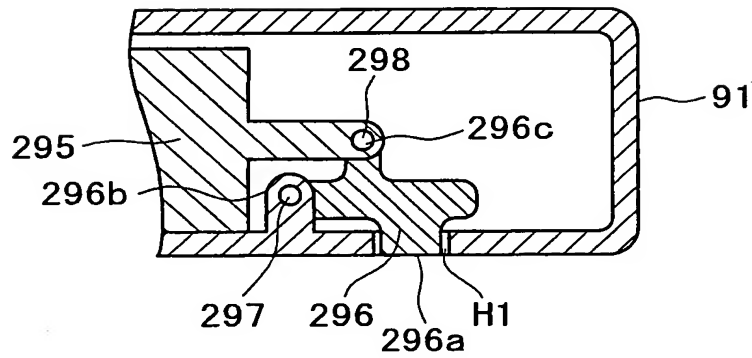
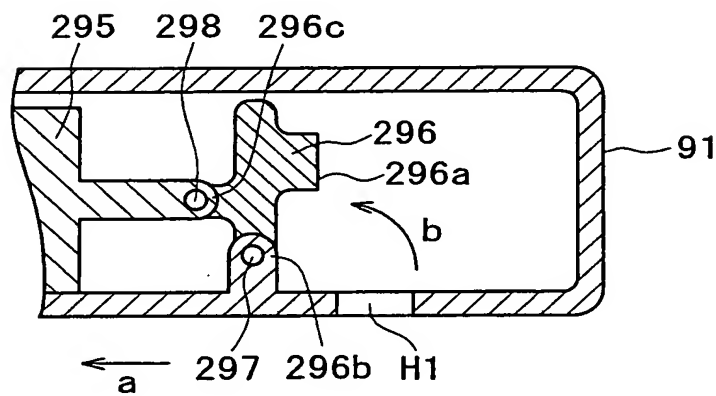


FIG. 12B



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FIG. 13 A

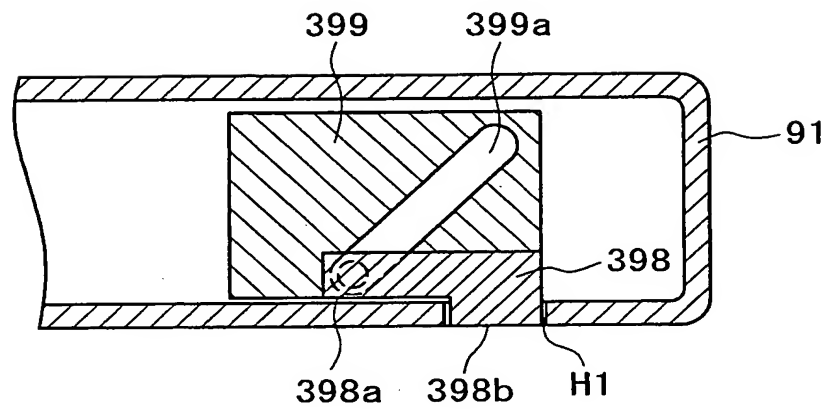
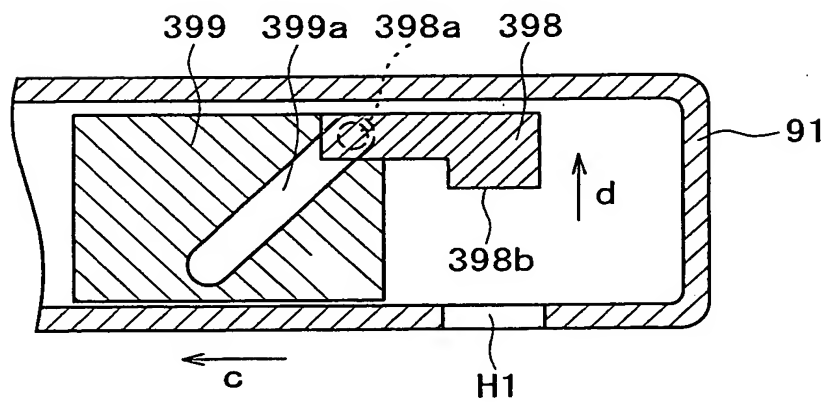


FIG. 13 B



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FIG. 14

REFLECTIVITY	GROOVE DEPTH (PHASE DIFFERENCE OF PULL-IN WITH RESPECT TO PUSH- PULL)	U-TOC "UMD"	P-TOC "UMD"	ADIP ECC/CRC C	BCA	DETECTION HOLE H0 SW0 O OPEN/● CLOSED	DETECTION HOLE H1 SW1 O OPEN/● CLOSED	WRITING ENABLED/ DISABLED
REPRODUCTION -ONLY MD REPRODUCTION-ONLY HIGH-DENSITY MD (TYPE B)	H	λ/4 ~ λ/2 (ADVANCE)	ABSENT	subQ CRC	ABSENT	○	●	DISABLED
			PRESENT		PRESENT "1.5"	○	○	DISABLED
			ABSENT		ABSENT	○	○	DISABLED
RECORDING AND REPRODUCING MD						●	○	ENABLED
HIGH-DENSITY MD TYPE A	L	0 ~ λ/4 (DELAY)	ABSENT	ADIP CRC	ABSENT	○	○	DISABLED
			PRESENT		PRESENT "1.5"	○	○	ENABLED
			PRESENT		PRESENT "1.5"	○	●	ENABLED
HIGH-DENSITY MD TYPE B			NO U-TOC	ADIP ECC	PRESENT "3"	○	○	DISABLED
			NO P-TOC			○	●	ENABLED
HIGH-DENSITY MD TYPE C		λ/4 ~ λ/2 (ADVANCE)				●	●	DOES NOT EXIST
DISK TYPE DETER- MINATION METHOD	<1>	○	○					DETERMI- NATION IS POSSIBLE WITH ANY OF COMBINATIONS
	<2>		○	○				
	<3>		○		○		○	
	<4>		○			○	○	
	<5>		○		○			
	<6>		○					

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FIG. 15A

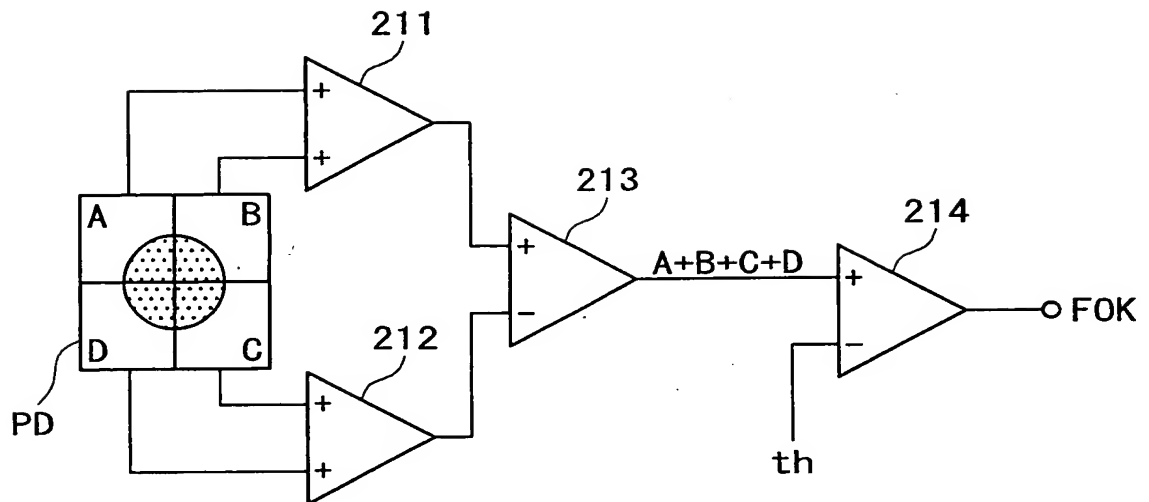


FIG. 15B

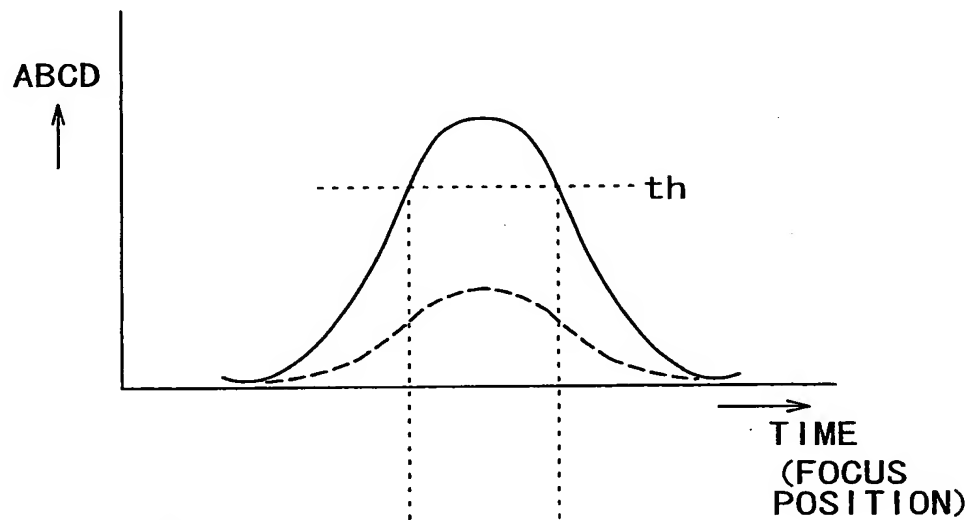
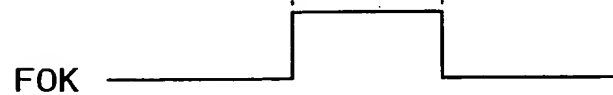
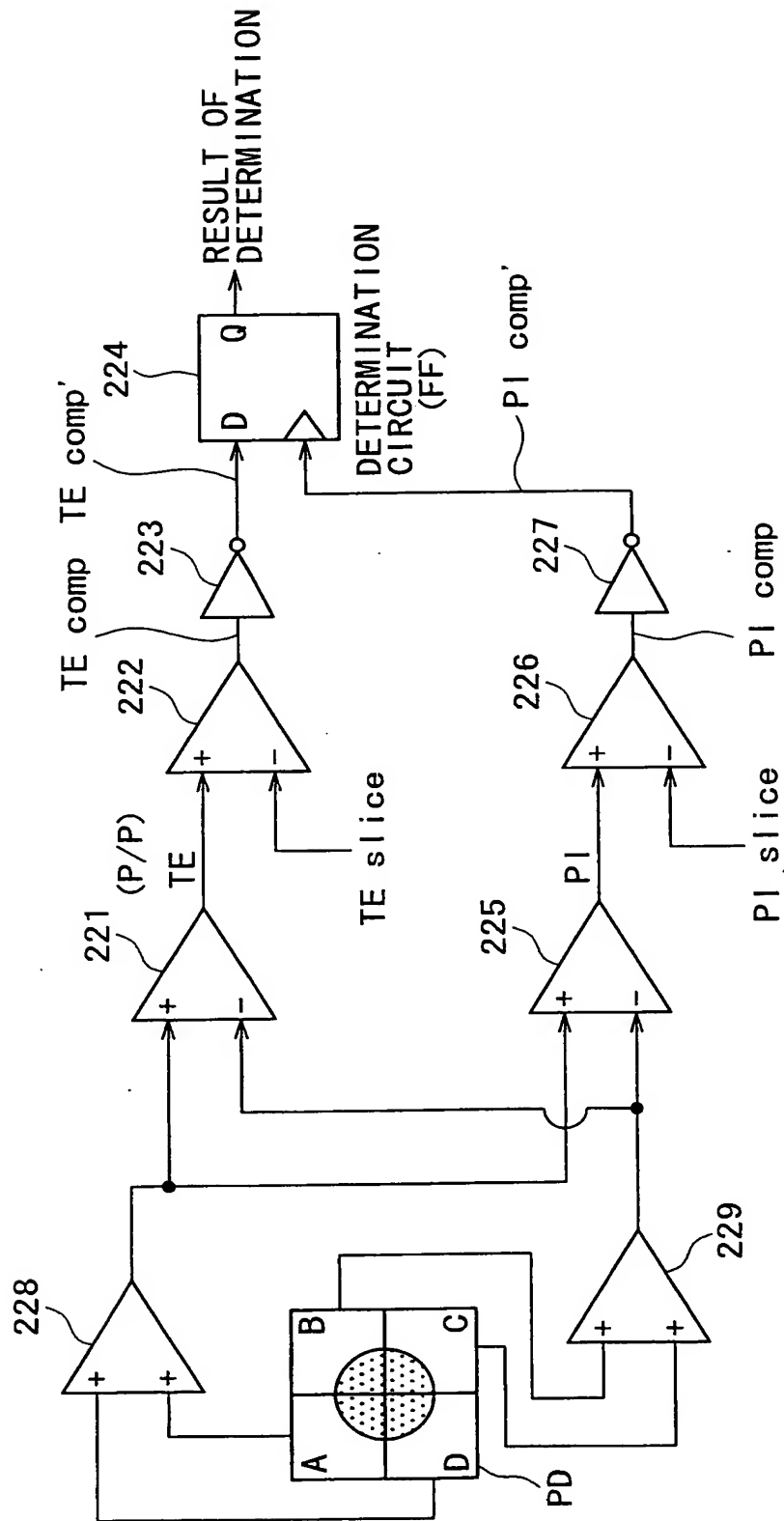


FIG. 15C



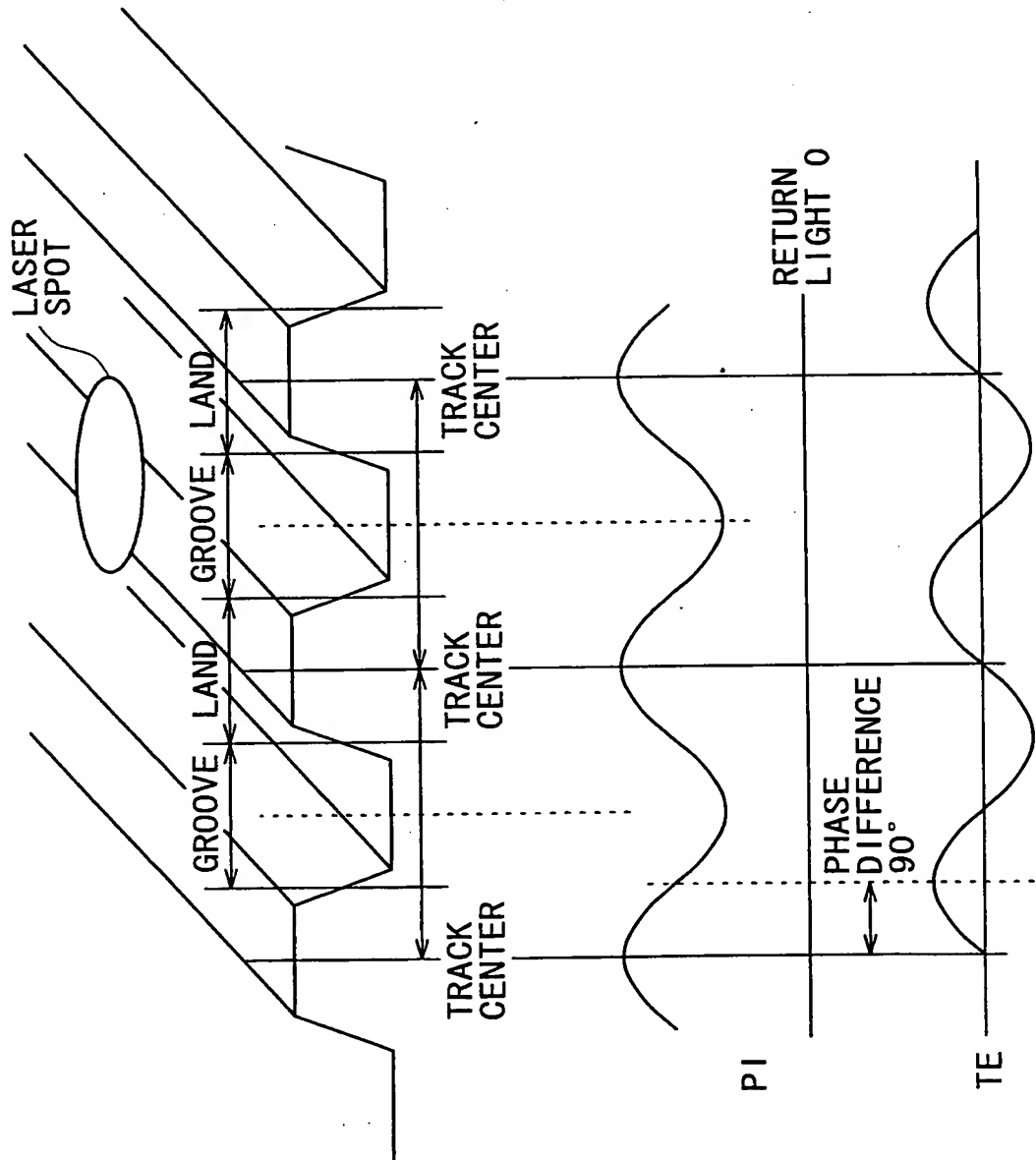
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FIG. 16



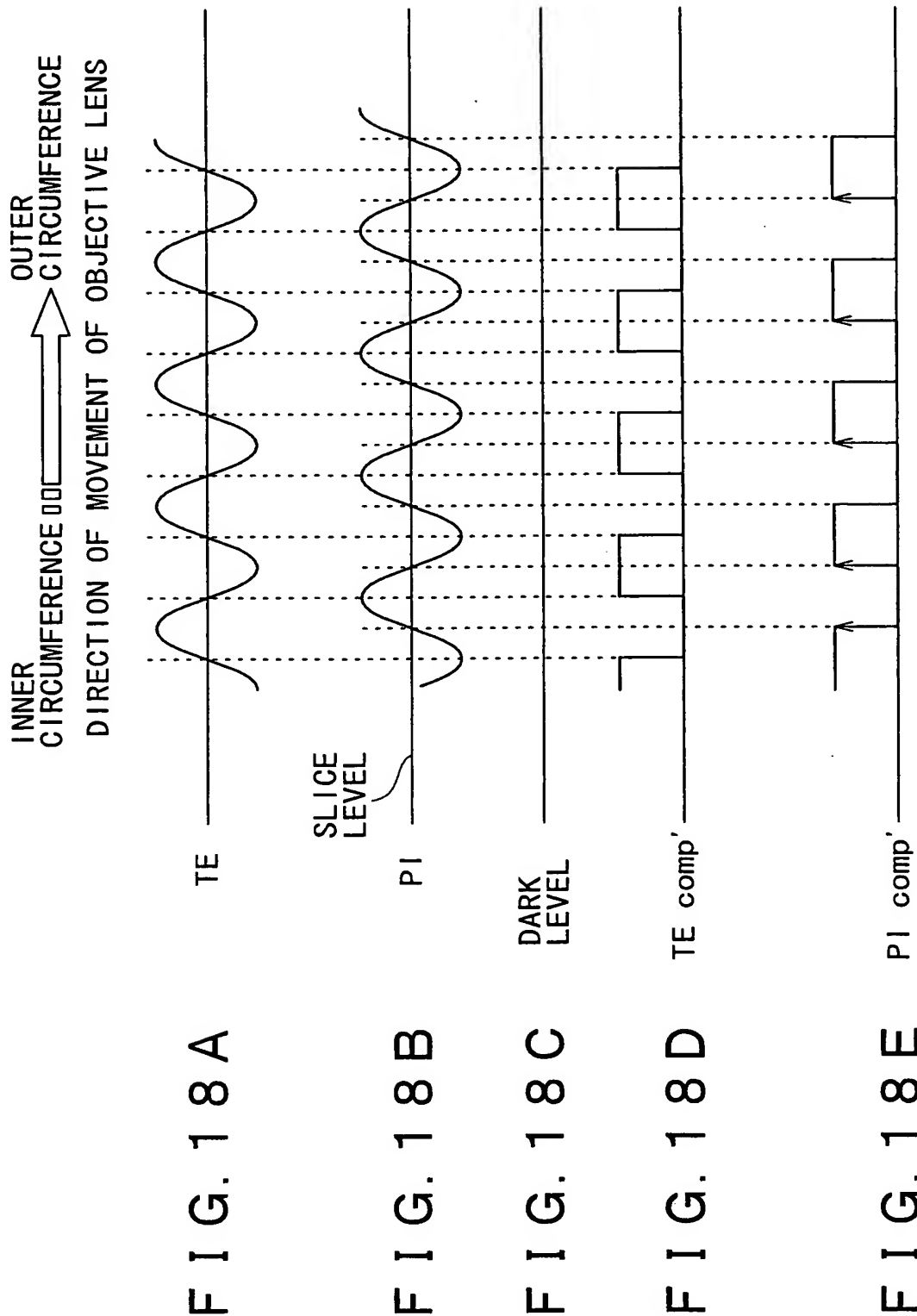
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FIG. 17





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INNER  
CIRCUMFERENCE  $\square\square$   $\longrightarrow$  OUTER  
CIRCUMFERENCE  
DIRECTION OF MOVEMENT OF OBJECTIVE LENS

FIG. 19A

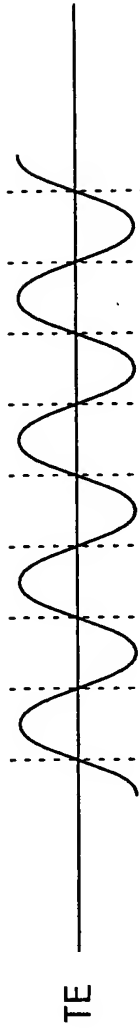


FIG. 19B

SLICE  
LEVEL

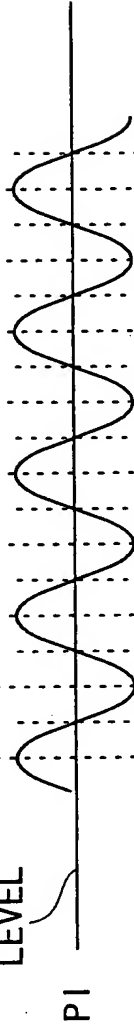


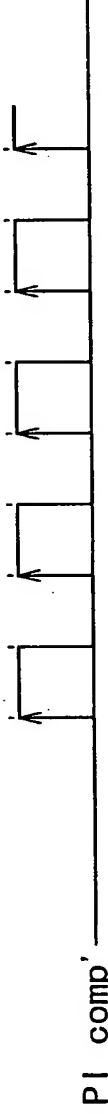
FIG. 19C



FIG. 19D

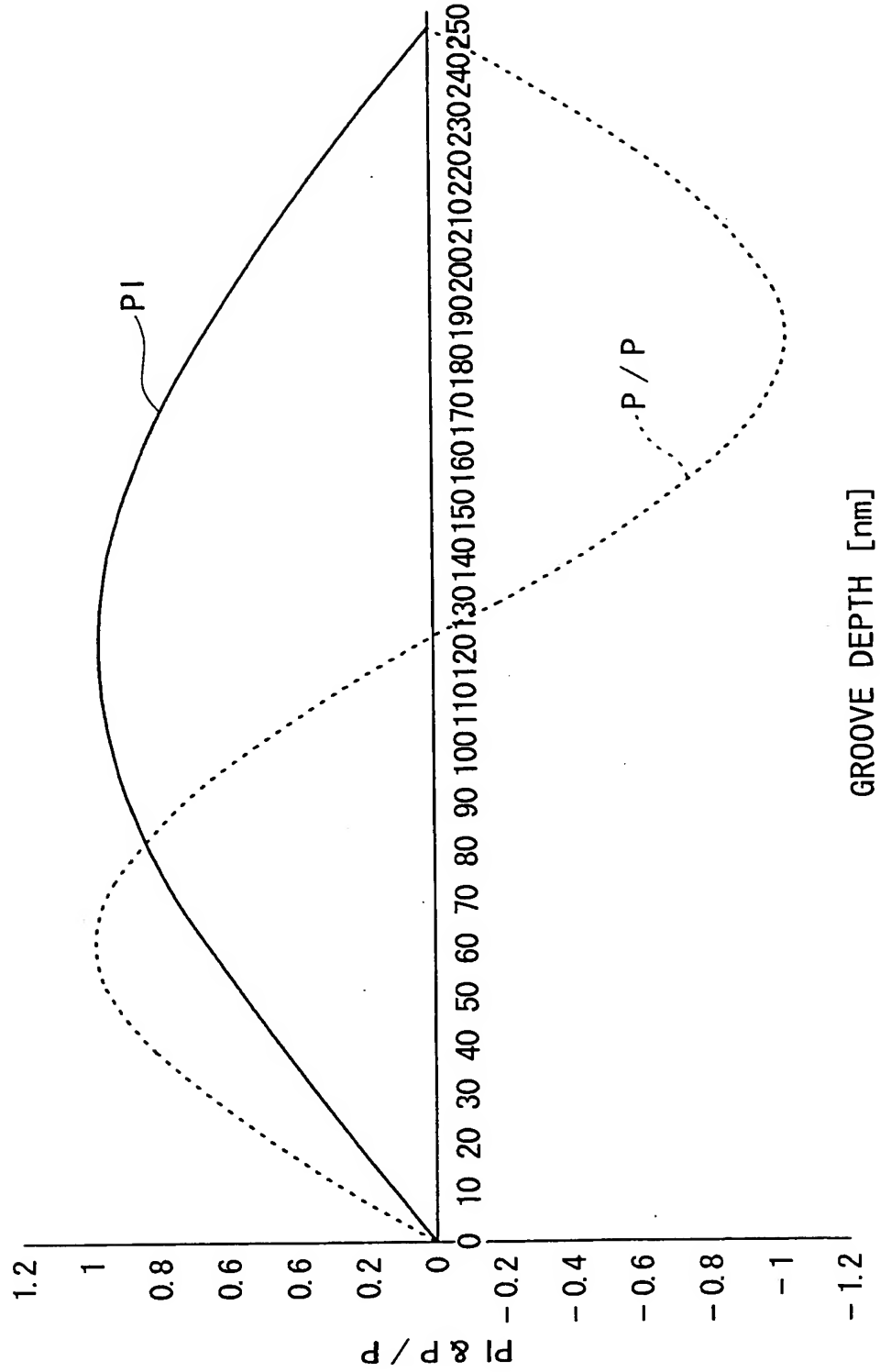


FIG. 19E



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FIG. 20



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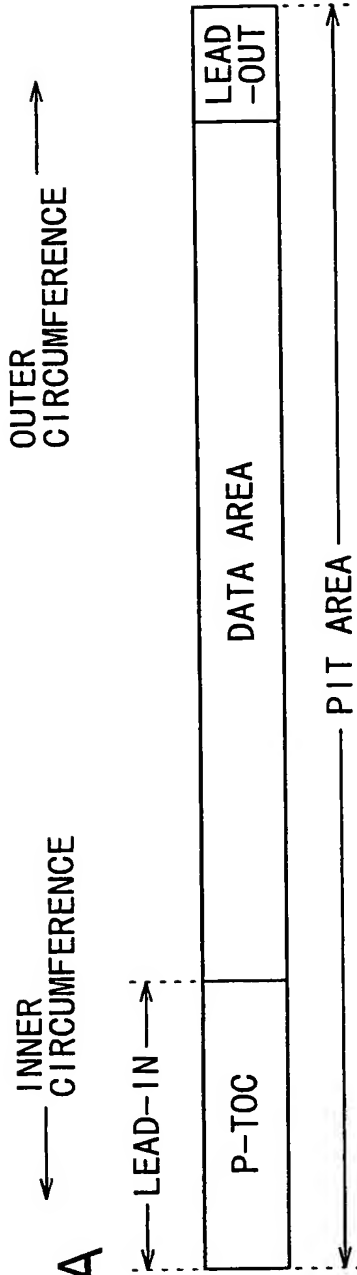


FIG. 21B

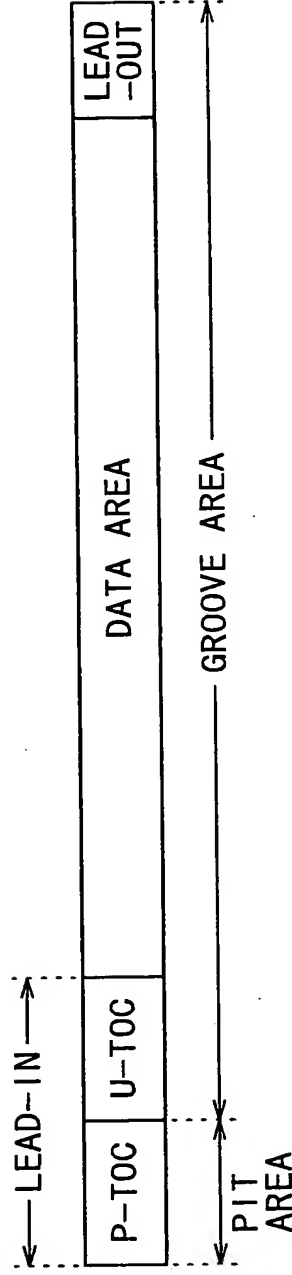
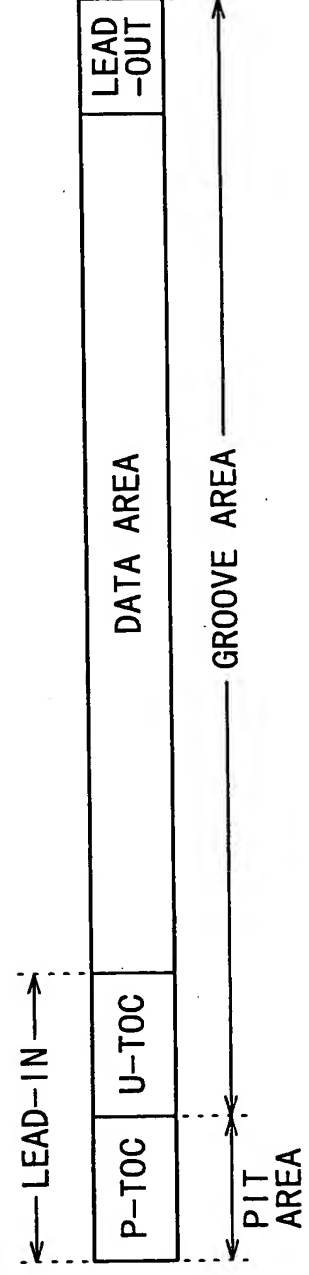


FIG. 21C



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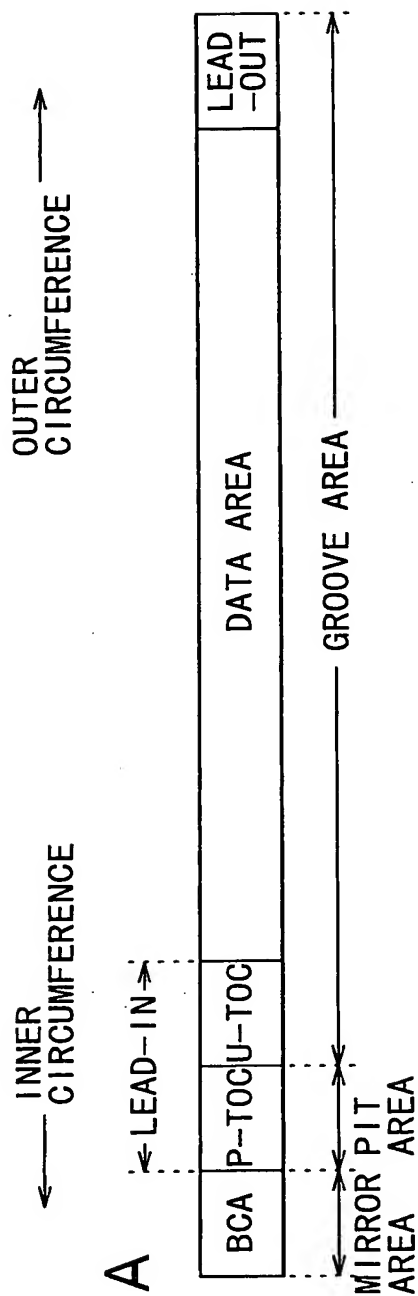


FIG. 22A

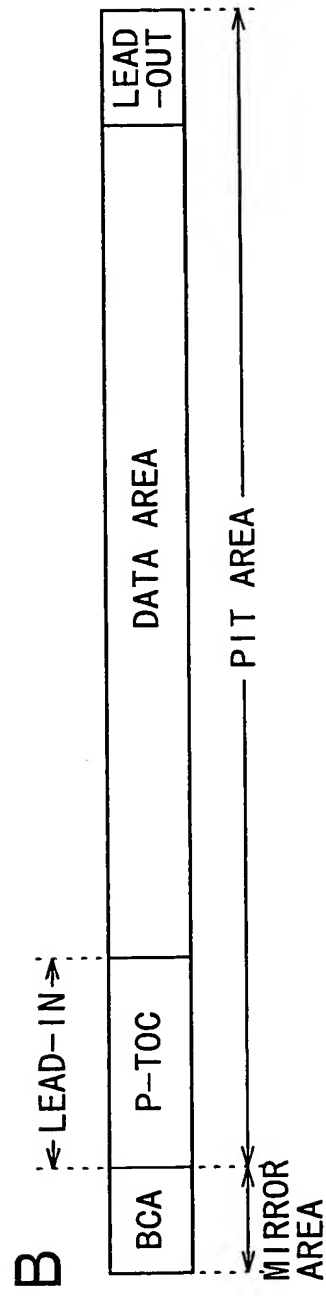


FIG. 22B

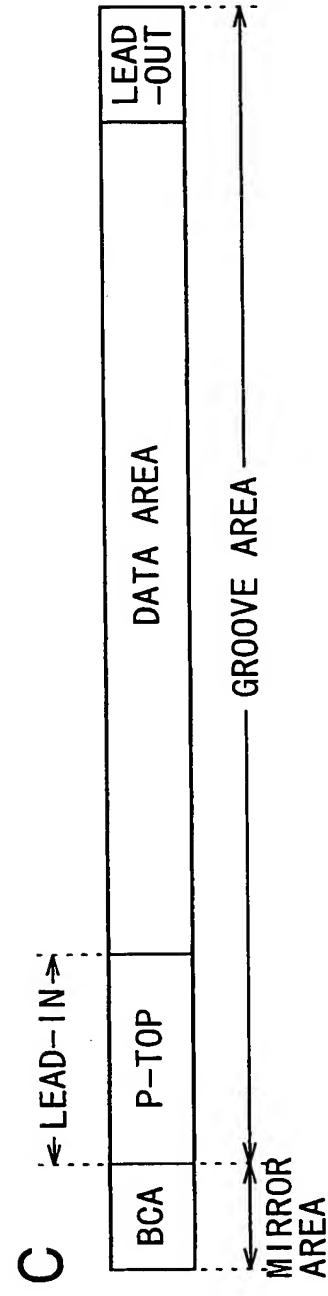


FIG. 22C

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# FIG. 23

		16 BITS				16 BITS				
		MSB	LSB	MSB	LSB	MSB	LSB	MSB	LSB	
SYNC	{	00000000	11111111	11111111	11111111	11111111	11111111	11111111	11111111	0
		11111111	11111111	11111111	11111111	11111111	11111111	11111111	11111111	1
		11111111	11111111	11111111	11111111	11111111	00000000			2
ADDRESS	{	CLUSTER H	CLUSTER L	SECTOR	MODE					3
										4
										5
SYSTEM ID	{	"M"	"I"	"N"	"I"					6
		DISK TYPE	RECORDING POWER	FIRST TRACK NUMBER	LAST TRACK NUMBER					7
		LEAD-OUT START ADDRESS (ROA)			USED SECTOR					8
POINTER PORTION	{	POWER CALIBRATION AREA START ADDRESS (PCA)			RECORDING POWER					9
		U-TOC START ADDRESS (USTA)								10
		RECORDABLE USER AREA START ADDRESS (RSTA)								11
			P-TN01	P-TN02	P-TN03					12
		P-TN04	P-TN05	P-TN06	P-TN07					13
		P-TN0248	P-TN0249	P-TN0250	P-TN0251					74
		P-TN0252	P-TN0253	P-TN0254	P-TN0255					75
										76
										77
TABLE PORTION (255 PARTS TABLE)	{	(01h)	START ADDRESS		TRACK MODE					78
			END ADDRESS							79
		(02h)	START ADDRESS		TRACK MODE					80
			END ADDRESS							81
		(03h)	START ADDRESS		TRACK MODE					82
			END ADDRESS							83
		(FCh)	START ADDRESS		TRACK MODE					580
			END ADDRESS							581
		(FDh)	START ADDRESS		TRACK MODE					582
			END ADDRESS							583
		(FEh)	START ADDRESS		TRACK MODE					584
			END ADDRESS							585
		(FFh)	START ADDRESS		TRACK MODE					586
			END ADDRESS							587

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# FIG. 24

		16 BITS				16 BITS					
		MSB	LSB	MSB	LSB	MSB	LSB	MSB	LSB		
SYNC	ADDRESS →	00000000		11111111		11111111		11111111		0	
		11111111		11111111		11111111		11111111		1	
		11111111		11111111		11111111		00000000		2	
		CLUSTER H		CLUSTER L		SECTOR (00h)		MODE (02h)		3	
								4			
								5			
								6			
MAKER CODE		MODEL CODE		FIRST TRACK NUMBER		LAST TRACK NUMBER		7			
						USED SECTOR		8			
								9			
						DISK SERIAL NUMBER		10			
POINTER PORTION		DISK ID		P-DFA		P-EMPTY			11		
		P-FRA	P-TN01	P-TN02	P-TN03			12			
		P-TN04	P-TN05	P-TN06	P-TN07			13			
P-TN0248		P-TN0249		P-TN0250		P-TN0251		74			
P-TN0252		P-TN0253		P-TN0254		P-TN0255		75			
								76			
								77			
TABLE PORTION (255 PARTS TABLE)	(01h)	START ADDRESS						TRACK MODE		78	
		END ADDRESS						LINK INFORMATION		79	
	(02h)	START ADDRESS						TRACK MODE		80	
		END ADDRESS						LINK INFORMATION		81	
	(03h)	START ADDRESS						TRACK MODE		82	
		END ADDRESS						LINK INFORMATION		83	
	(FCh)	START ADDRESS						TRACK MODE		580	
		END ADDRESS						LINK INFORMATION		581	
	(FDh)	START ADDRESS						TRACK MODE		582	
		END ADDRESS						LINK INFORMATION		583	
	(FEh)	START ADDRESS						TRACK MODE		584	
END ADDRESS						LINK INFORMATION		585			
(FFh)	START ADDRESS						TRACK MODE		586		
	END ADDRESS						LINK INFORMATION		587		

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FIG. 25B

FIG. 25A

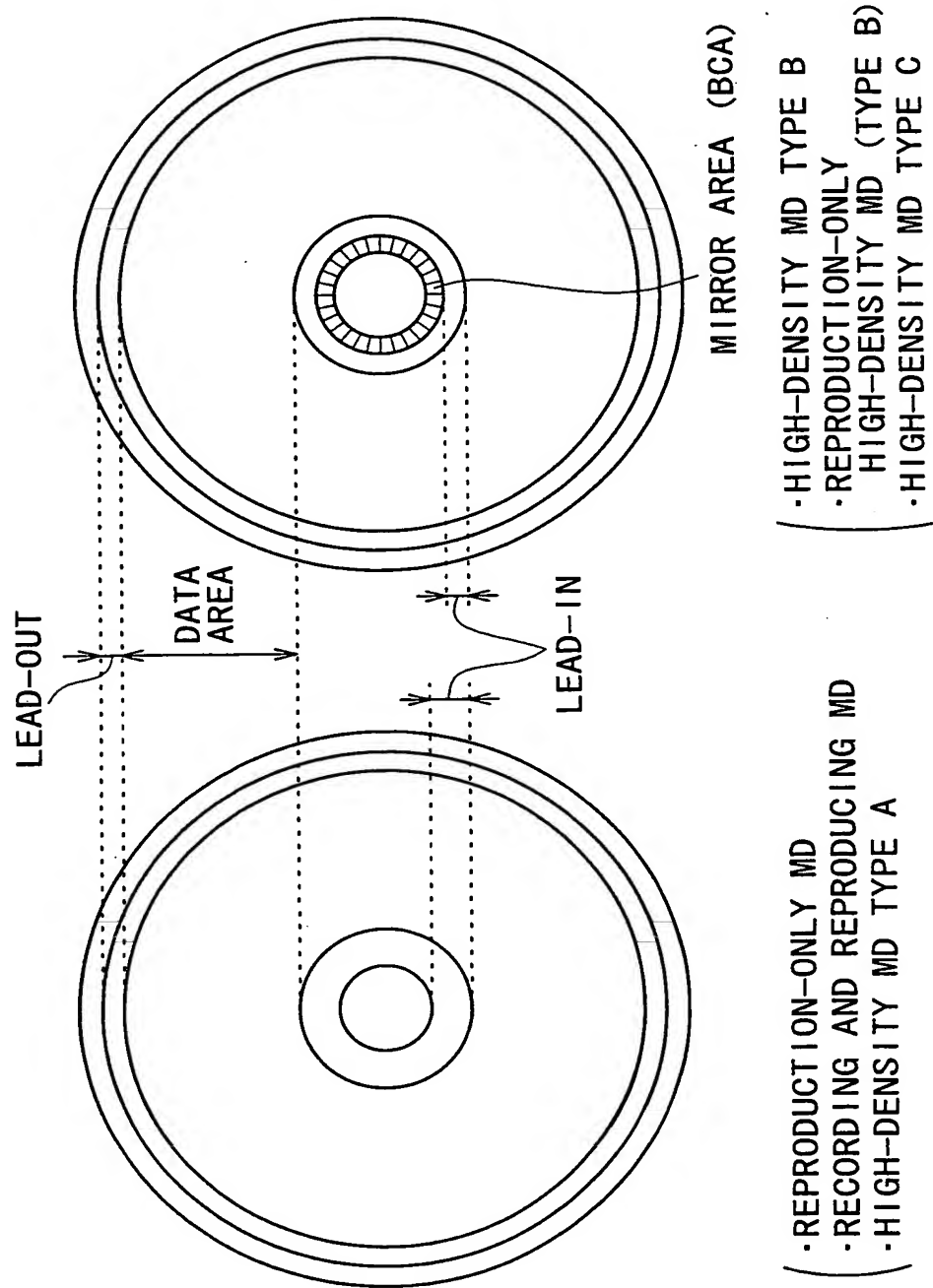




FIG. 26A

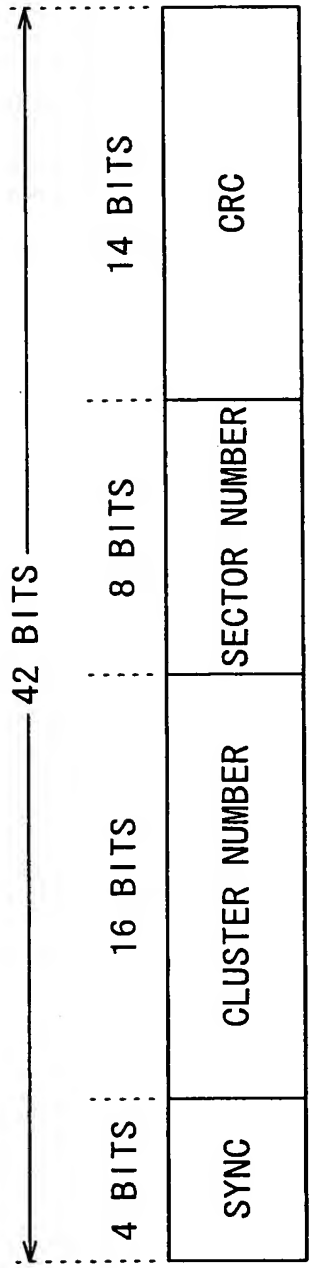
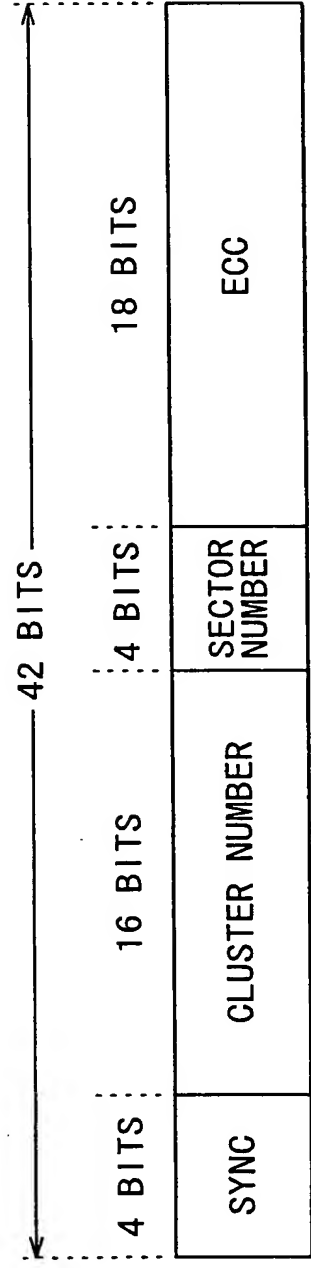
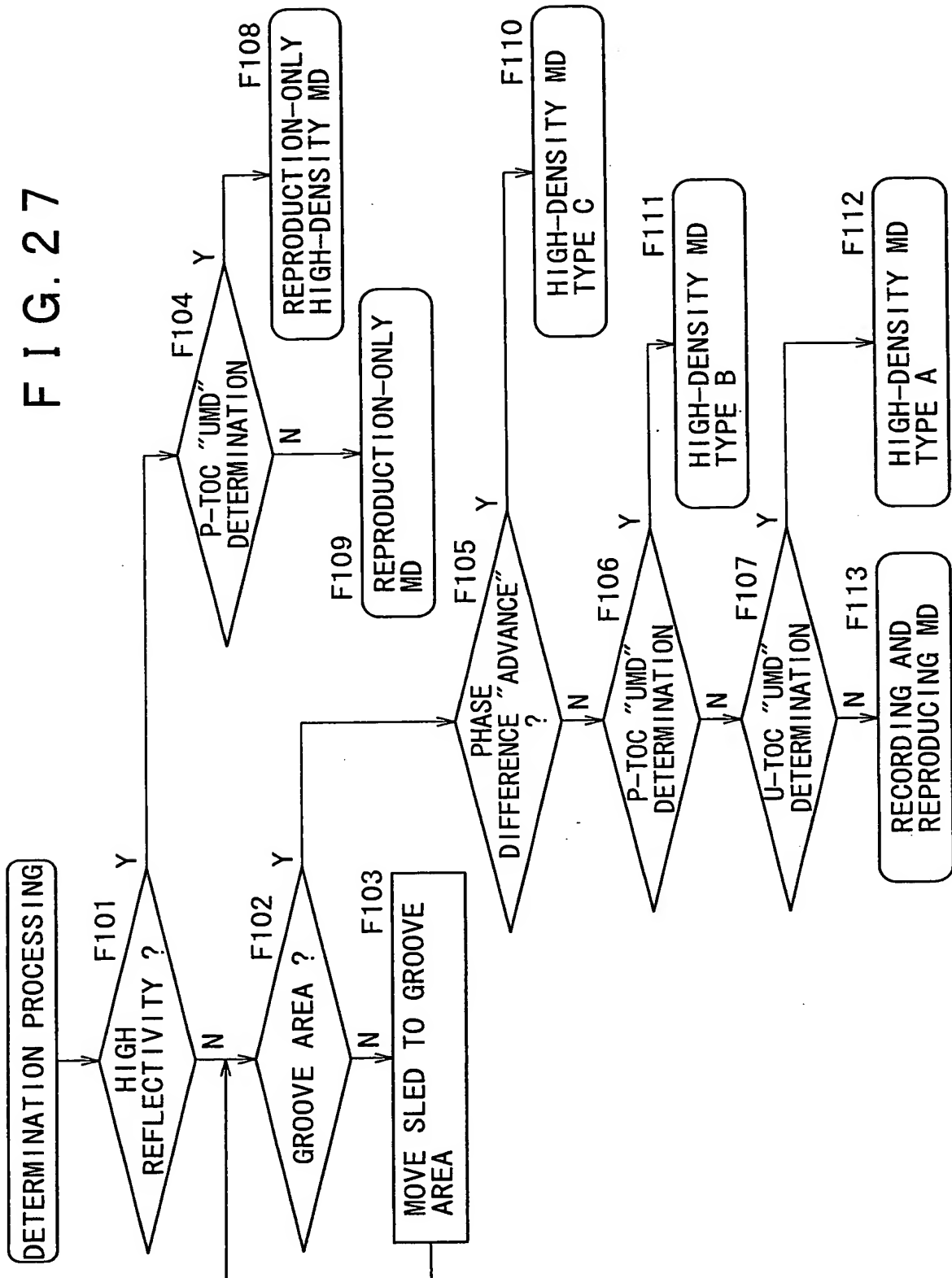


FIG. 26B



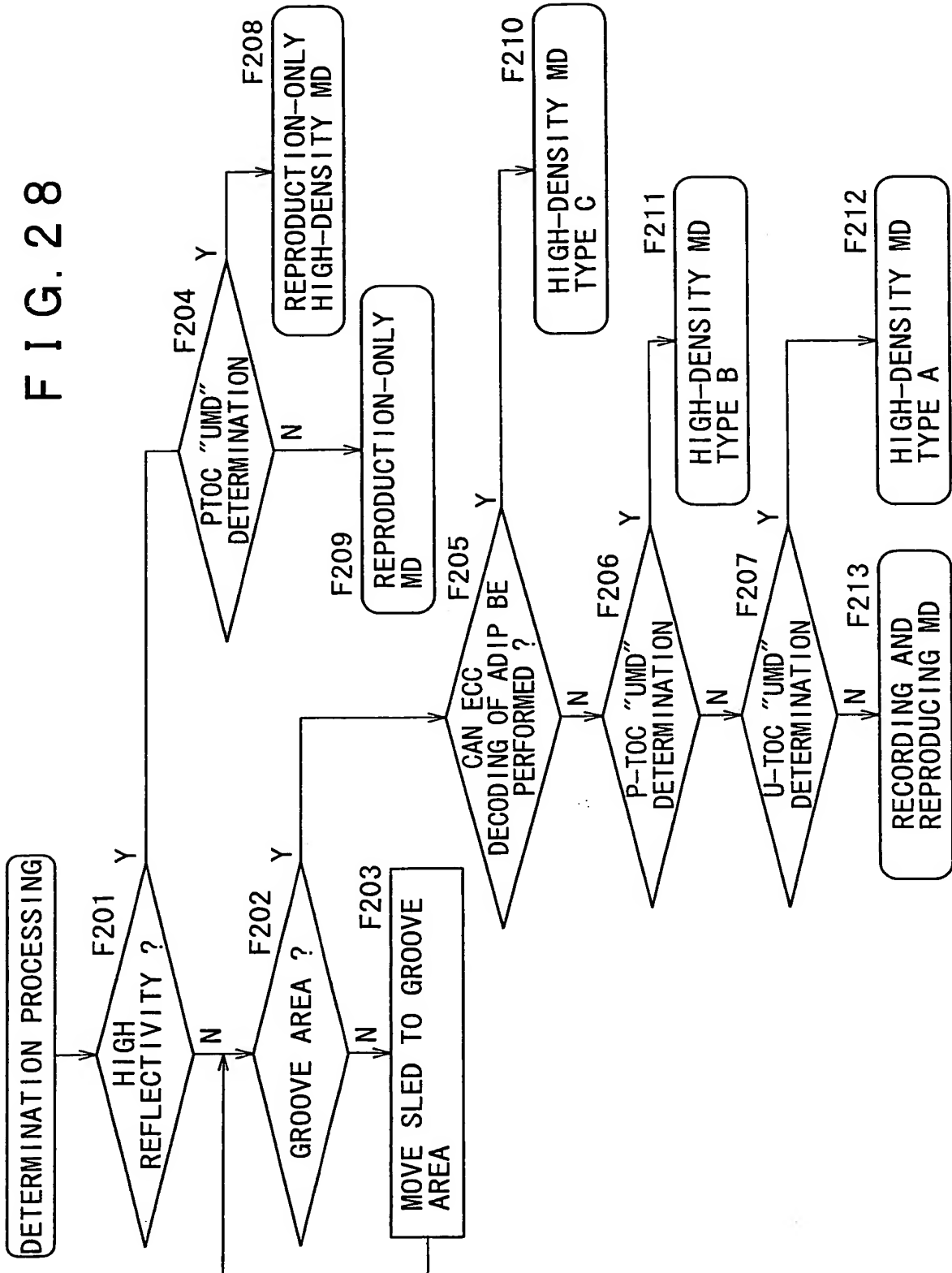
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FIG. 27



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FIG. 28



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FIG. 29

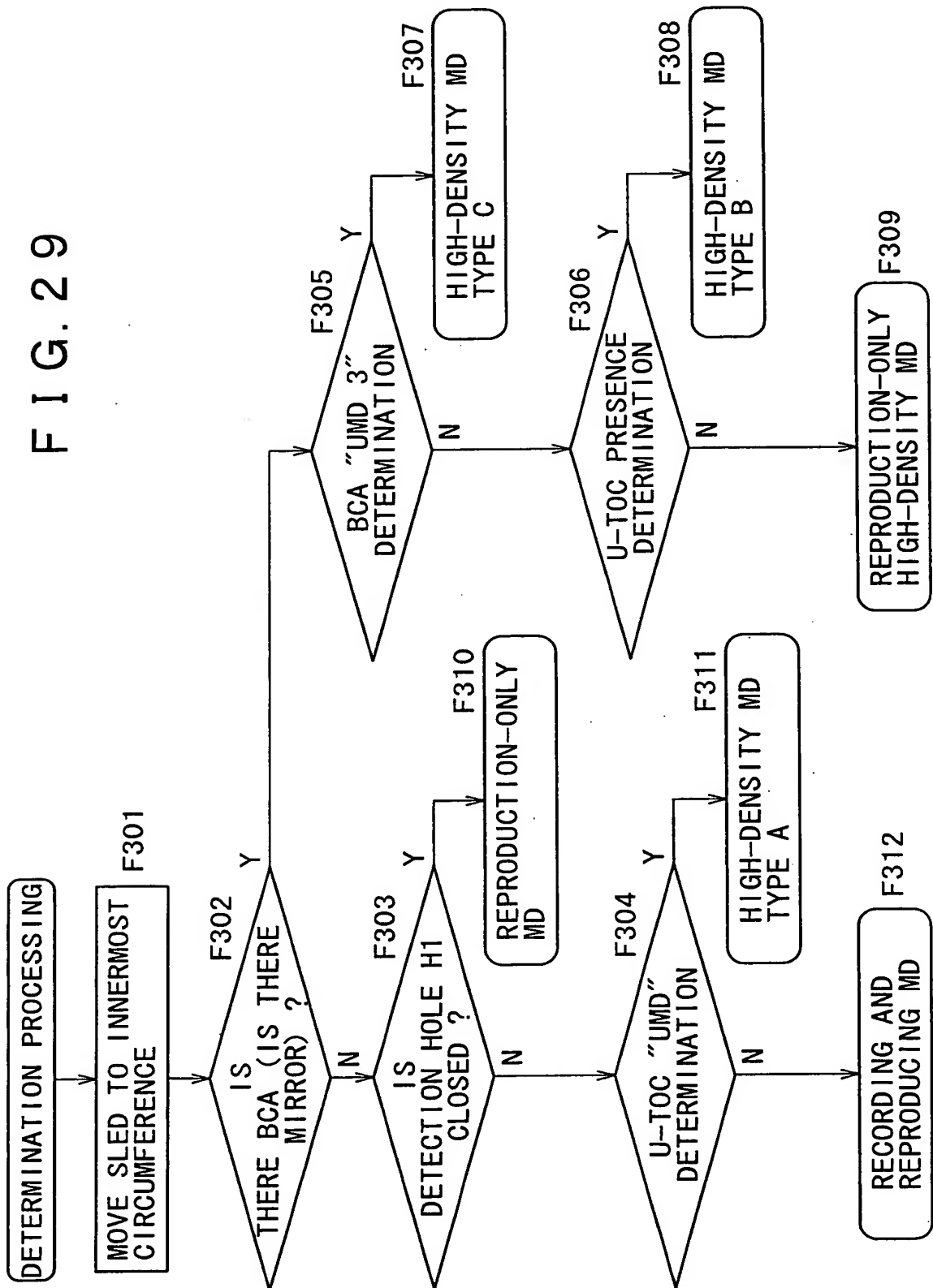
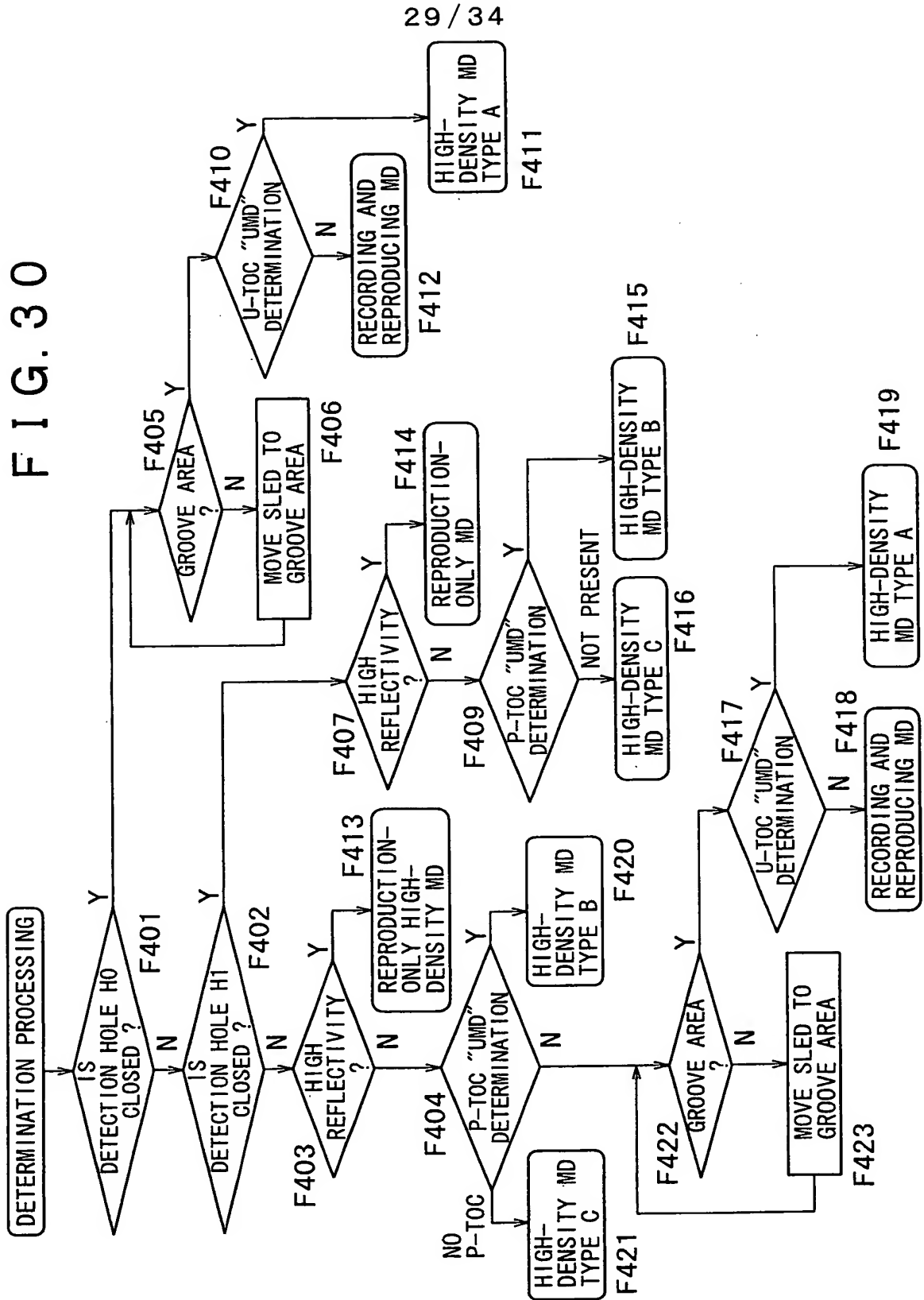
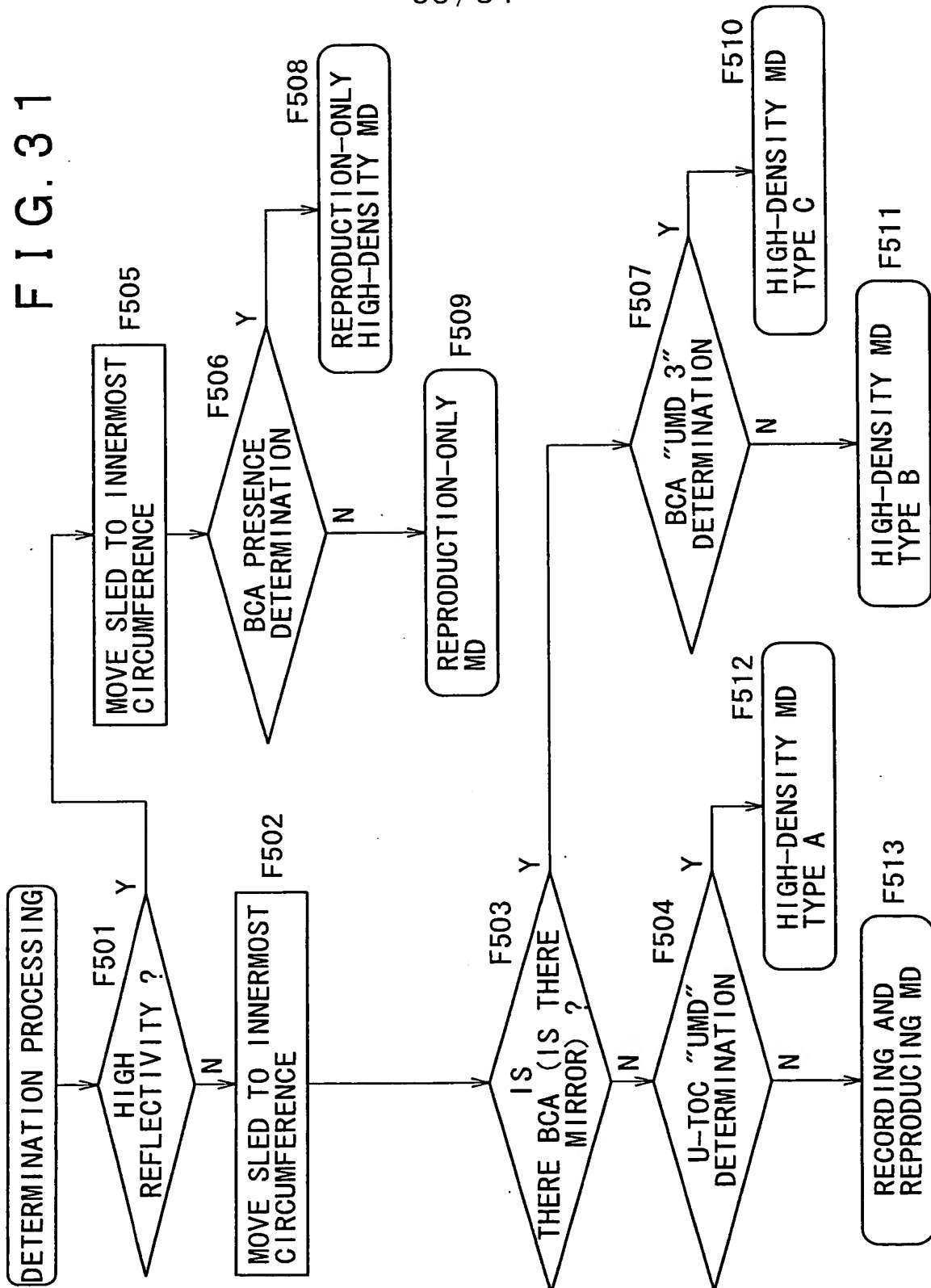


FIG. 30



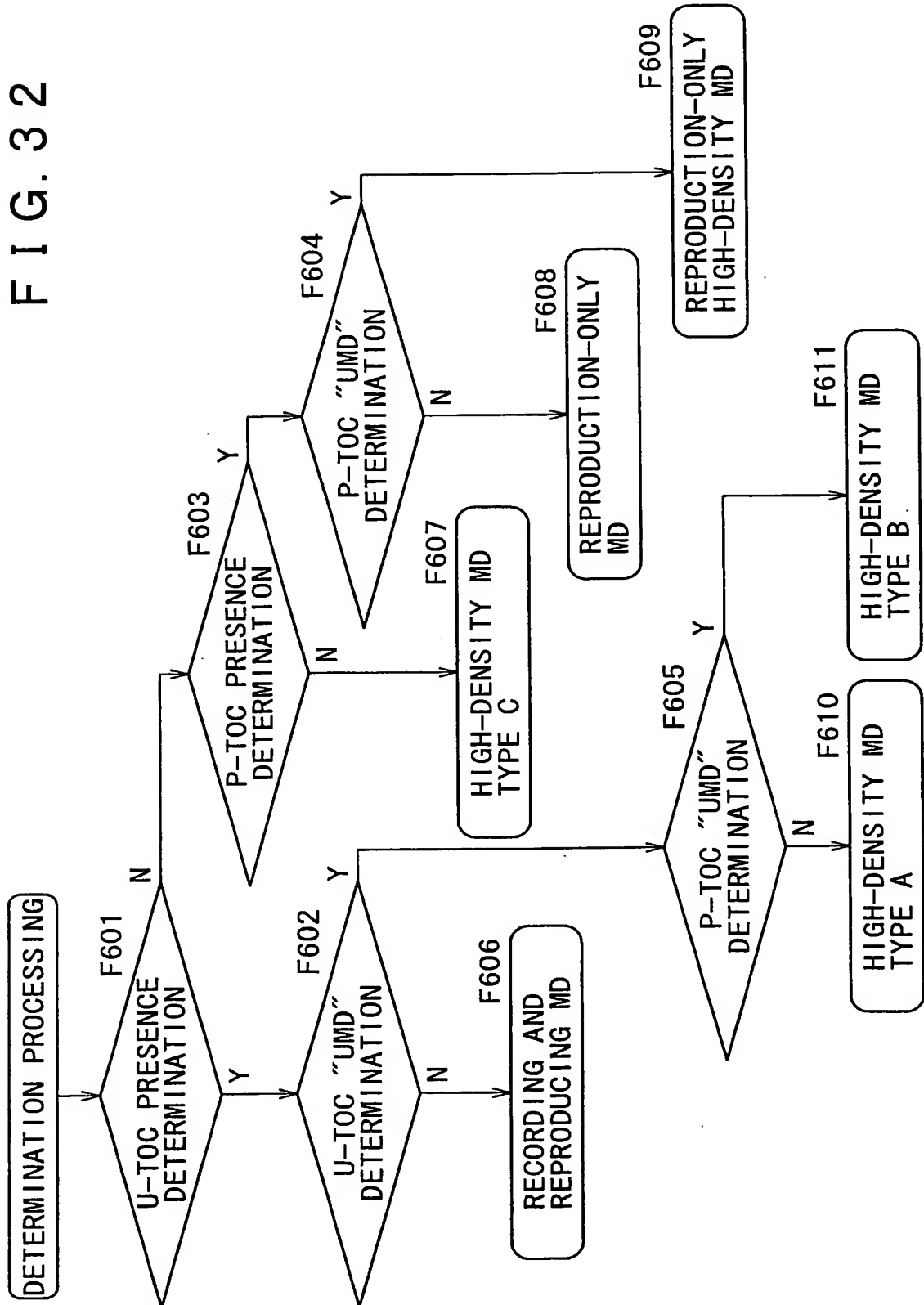
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FIG. 31



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FIG. 32



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# FIG. 33A

○ OPEN    ● CLOSED

DETECTION HOLE MODE	SW0 (WRITE PROTECT)	SW1 (REFLECTIVITY)	
MODE 0	○	○	RECORDING AND REPRODUCING MD HIGH-DENSITY MD TYPE A } WRITING DISABLED
MODE 1	○	●	REPRODUCTION-ONLY DISK
MODE 2	●	○	RECORDING AND REPRODUCING MD HIGH-DENSITY MD TYPE A } WRITING ENABLED
MODE 3	●	●	IMPOSSIBLE

# FIG. 33B

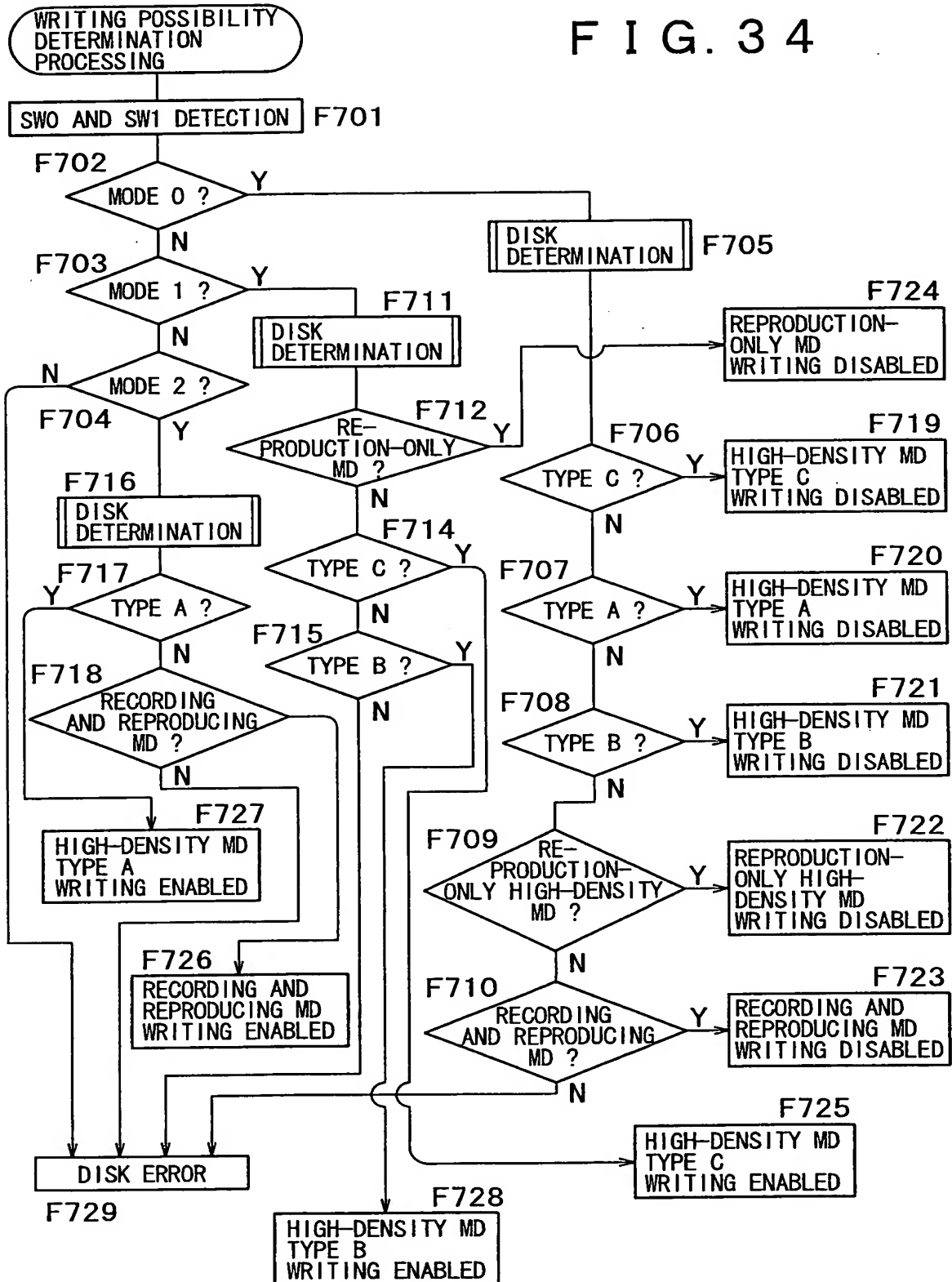
○ OPEN    ● CLOSED

DETECTION HOLE MODE	SW0 (ALWAYS OPEN)	SW1 (WRITE PROTECT)	
MODE 0	○	○	WRITING DISABLED
MODE 1	○	●	WRITING ENABLED
MODE 2	●	○	IMPOSSIBLE
MODE 3	●	●	IMPOSSIBLE



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# FIG. 34



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FIG. 35

